COQUILLE RIVER INSTREAM ENHANCEMENT PROJECT #201-466

by
COQUILLE WATERSHED ASSOCIATION

MONITORING REPORT
July 2005

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Additional copies of this report can be obtained from the Coquille Watershed Association at 450 Highway 42 East, Coquille, OR 97423.
Phone (541) 396-2229 for more information.

Background Information

As discussed in the Final Report for this grant, these three projects were done in areas of the Coquille Watershed where splash damming or 'stream cleaning' had occurred at one time. Cherry Creek and Myrtle Creek were both splash dammed, which has had a long term effect on these streams. Essential spawning gravel was washed out, leaving the majority of the stream bottom as bedrock. This also made it difficult for the stream to retain any new substrate or large woody debris, critical for complex aquatic habitat. While Bear Creek wasn't splash dammed, it did have woody debris removed at a time when it was thought to be detrimental to the streams. We added logs to these sites to help gain some of the complexity back that was lost years ago.

Cherry Creek Instream Phase II

Five full spanning weirs and one barb were placed in Cherry Creek (phase II) with goals of recruiting spawning gravel, retaining logs and debris, and adding structure and complexity. Our pre-project habitat survey in 2002 documented 31% gravel throughout the project reach. A February 2003 survey showed the gravel had decreased to about 24% and in July 2005 we documented another slight drop. To offset the difference, we documented an increase in boulders throughout the project reach, due to the construction of the five weirs. The weirs are counted in our survey and increase the boulder percentage. Unfortunately, we have not seen an increase in spawning gravel like we expect to see eventually. One of the weirs has blown out partially in the center and is building up gravel and cobble below the weir, rather than above it. One positive change is the increase in large wood retention. The amount of wood throughout the reach has doubled since the project was completed. In comparing phase I (done the year before) to phase II, we notice that phase I is retaining good gravel already. The differences we see between the locations are the slope changes (slope increases in phase II) and the boulder size used is much smaller on phase II. These are likely reasons that we aren't getting the gravel recruitment we want.

Cherry Creek Boulder Weir
July 2005

Cherry Creek Continued

Cherry Cr.- Middle Weir showing little gravel retention
July 2005

Cherry Cr.- Showing gravel bar built up below weir
July 2005

Myrtle Creek Instream

Myrtle Creek Instream has had really positive changes happen for the size of the project. Only two structures were placed here with boulders and logs combined. The size of the creek and the winter flows contribute to a dynamic system that readily changes over the seasons. At the lower structure, shown in photo 3 & 4, a backwater channel has formed, providing fish refuge from the main creek. The quick changes are apparent looking at the two photos of the lower site. In November of 2004, grass was beginning to grow on the sandbar. Over the next two months, high waters had changed the shape of the sandbar and removed the grass from it. Photos from July 2005 show an isolated pool and a good sand bar built up below structure 2.

Photo #1
Myrtle Creek Site #1
Nov. 2004

Photo #2
Myrtle Creek Boulder/Log Site #1 (Upper Site)
Jan. 2005

Photo #3 Photo #4

Nov. 2004 Myrtle Creek Site #1 (Lower Site) Jan. 2005

Myrtle Creek Instream
Chinook Salmon digging a redd
Nov. 2004

Bear Creek Instream

This project consists of 16 log structures spanning nearly a mile of stream. The total percent of pool area is now 47%, well over the benchmark of 35% or more. The substrate has remained about the same, with a silt/organic/sand combination of about 63%. Gravel accounts for about 36%. The average depth of the 18 scour pools is .86 meters. The 23 riffles account for about 11% of the area. The landowner has had some concerns about the recent flooding and how it has affected the banks around the log structures. Photos below show some minor scouring along the right bank, although there is no concern of trees falling. As far as the logs go, they are staying in place with no problem. Winter floods have not moved them out of their original location. One structure has built up a nice dam, which is serving as excellent aquatic habitat. Numerous 6-8" salmonids were seen swimming under this buildup. So far, the dam is not negatively affecting the surrounding area. We did not conduct 2004-05 spawning surveys in this reach because of some landowner concerns at that time.

Bear Creek Instream- Scoured Banks
July 2005

Bear Creek Continued

Gravel bar building
July 2005

Upper Structure
July 2005

Maintenance Performed/Costs Associated with Maintenance& Monitoring

The CWA has done no maintenance on these three sites since their original construction. Costs associated with these sites include weekly spawning surveys on Cherry Creek and Myrtle Creek through the end of spawning season, annual habitat surveys and analysis on all three, and the report writing. All costs for monitoring and report writing total about $800.

Project Assessment

Overall, the projects are serving their purpose well. There has been a little erosion problem on Bear Creek that the landowner is concerned about, as mentioned above. We are currently working on this issue, although we haven't decided on the best plan of action at this time. We will do a site visit with the landowner first so we can discuss all valid concerns before making plans involving repair work. Streams are dynamic and it may be that Bear Creek is taking its natural course following a large event. We will get the opinion of a hydrologist or fish biologist before deciding what to do. Cherry Creek and Myrtle Creek projects are holding up well and are doing a good job of working toward the goals of the projects.

Public Awareness

Our typical public awareness activities include the Powers Fishing Derby, the Fly-Fishing Expo, the Coos County Fair, and school presentations put on by the coordinator. Our quarterly newsletter highlights any important happenings involving project work. We also discuss these activities at our monthly projects committee and executive council meetings. We have not highlighted these projects specifically, although the landowner at Camp Myrtlewood has put together a video highlighting the Myrtle Creek project and the work done by Mark Villers. This landowner is also a new member on our council as well as our secretary.

Expected Outcome / Results

Our expected results vary from site to site, although in the big picture, we'd like to see an overall improvement in structure, complexity, and substrate of each of these sites. For Cherry Creek and Myrtle Creek we expect to see an increase in spawning gravel, leading to an increase in salmon spawning in these reaches. In addition, the structures placed should break up the stream units and add more pools. In Bear Creek we expect to see continued scouring and pools building as the winter floods change the surroundings little by little.